

REMARKS

Claims 1-32 are pending in the present application. By this Response, Applicant has amended claims 1-3, 9, 14-16, 19, 25-27, and 31. Applicant respectfully submits no new matter has been entered by these amendments and that the amendments are fully supported by the specification as originally filed. Accordingly, claims 1-32 are at issue.

The Examiner has objected to claims 2-3, 15-16 and 26-27 “because of the following informalities: “CAN” and “CANopen” need to rewrite as Controller Area Network.” Applicant has amended these claims in accordance with the Examiner’s remarks. Accordingly, Applicant respectfully submits this objection is moot.

The Examiner has rejected claims 1-32 under 35 U.S.C. §103(a) as being unpatentable over Hanf et al. (U.S. Patent No. 6,115,831) in view of Walker et al. (U.S. Patent No. 6,260,073). Applicant respectfully traverses this rejection.

Claim 1, as amended herein, is directed toward a communication network having a bus with a first line and a second line, and a plurality of devices connected to the bus. At least one of the plurality of devices includes a switch and a terminal resistor operably connected to the switch. Among other limitations, claim 1 requires the at least one device be configured so that “the switch inserts the terminal resistor between the first line and the second line of the bus in response to the terminate enable to electrically terminate a new end of the network.”

Hanf et al. discloses an integrated circuit for coupling a microcontrolled control apparatus to a two-wire bus. The integrated circuit is designed to operate in a Normal operating mode, a Standby operating mode and a Sleep operating mode. As shown in the Figures (particularly Figures 3a – 7 and 9-10), the circuit includes terminating resistors 16, 17 and 17’, and switches S1, S2, SOL, S3 and 25’ (25’ is shown in Figures 6 and 7). The circuit also includes a function block 131 that controls the switches in response to various faults sensed on the bus. The faults identifiable by the circuit are graphically illustrated in Figure 11 and are identified at column 14, lines 12-19 of Hanf et al.

Unlike the network of claim 1, each of the termination resistors is used to selectively control only one line of the two-line bus, and is not inserted between the first line and second line to electrically terminate a new end of the network. As shown in Figures 3a, 3b, 4, 5, 9 and 10, resistor 16 is connected only to the CAN_H line of the bus and through switches S1 or SOL,

connects the CAN_H line to ground. Similarly, resistor 17 only connects the CAN_L line to the VCC through switch S2. Alternatively, the CAN_L line can be connected via resistor 17' and switch S3 to the VBATT. None of these embodiments discloses inserting the resistors between the two lines

In the embodiment of Figure 6, the double switch 25', when open – connects the CAN_L line to ground through resistor 16 and the CAN_H line to the VCC potential through resistor 17. When closed – the CAN_H line is effectively brought to ground while the CAN_L line, which is shown having a fault, is brought to the 5V potential of the VCC. Although the resistors 16 and 17 are inserted between the CAN_L and CAN_H lines, they do not act to electrically terminate a new end of the network. In fact, because the fault (on CAN_L) occurs between the A device and the B through N devices, the resistors 16 and 17 in the A device only act to insulate the A device from the fault. There is no disclosure of creating a new end of network in the B through N devices in view of the fault.

Walker et al. is cited as disclosing use of the Ethernet. Because the Ethernet is not a limitation of claim 1, Applicant respectfully submits all of the elements of claim 1, as amended, are not disclosed in the cited references and that claim 1 is patentable over Hanf et al. in view of Walker et al. Claims 2-13 depend on claim 1 and include each of its limitations. Therefore, Applicant respectfully submits claims 2-13 are also patentable over Hanf et al. in view of Walker et al.

Claim 14, as amended herein, is directed to a method of minimizing signal disruption in a communication network. Among other limitations, claim 14 requires “inserting with the switch a terminal resistor onto the communication line between the first line and the second line in response to the terminate enable to electrically terminate a new end of the network.”

As set forth above with respect to claim 1, Hanf et al. does not disclose this step. Accordingly, Applicant respectfully submits Claim 14 is patentable over Hanf et al. in view of Walker et al. Claims 15-24 depend on claim 14, either directly or indirectly, and include each of its limitations. Therefore, Applicant respectfully submits claims 15-24 are also patentable over Hanf et al. in view of Walker et al.

Claim 25, as amended herein, is directed to a system for minimizing signal disruptions in a communication network. Among other limitations, claim 25 requires “a terminal resistor

operably connected to the switch, wherein the switch inserts the terminal resistor onto the communication bus between the first line and the second line in response to the terminate enable to electrically terminate a new end of the network.”

As set forth above with respect to claim 1, Hanf et al. does not disclose this structure. Accordingly, Applicant respectfully submits Claim 25 is patentable over Hanf et al. in view of Walker et al. Claims 26-32 depend on claim 25 and include each of its limitations. Therefore, Applicant respectfully submits claims 26-32 are also patentable over Hanf et al. in view of Walker et al.

In light of the above amendments and remarks, Applicant respectfully submits claims 1-32 are in condition for allowance and requests reconsideration and allowance of these claims.

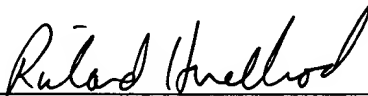
CONCLUSION

In light of the foregoing Amendments and Remarks, Applicant respectfully submits pending claims 1-32 are in condition for allowance. The Examiner is invited to contact the undersigned if there are any questions concerning this Response.

The Commissioner is authorized to debit or credit Deposit Account No. 23-0280 for any payment **deficiencies or overpayments** associated with this matter.

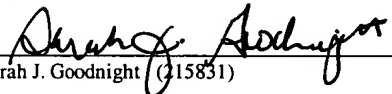
Respectfully submitted,

Dated: December 28, 2004

By: 
Richard C. Himelhoch, Reg. No. 35,544
Customer No. 46901
Wallenstein Wagner & Rockey, Ltd.
311 So. Wacker Drive – 53rd Floor
Chicago, IL 60606
(312) 554-3300

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: MAIL STOP AMENDMENT, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on December 28, 2004.


Sarah J. Goodnight (215831)